

## Patent Claims

1. A method for generating a structure representation which describes a specific automation system from a model structure representation which describes a general automation system, where the model structure representation has a structured representation of functional groups in the general automation system and their links to one another, and each functional group can be assigned one or more components of the specific automation system, and where the following steps are performed:
  - a text file reproducing the model structure representation is provided for a data processing device which controls the specific automation system;
  - those components of the specific automation system which can be jointly assigned to a functional group in the model structure representation are ascertained by the data processing device, and
  - the ascertained components are entered into the model structure representation to generate the structure representation which describes the specific automation system.
2. The method as claimed in claim 1, characterized in that
  - instructions contained in the text file prompt the data processing device to check only selected functional groups to determine whether a plurality of components of the specific automation system can be jointly assigned to this functional group.
3. The method as claimed in claim 1 or 2, characterized in that
  - the data processing device ascertains those components of the specific automation system which

- can be jointly assigned to a functional group in the model structure representation by sending an electronic query to the respective components or to a common control device which is superordinate to them, and
- the respective components or the common control device which is superordinate to them respond(s) to this electronic query by sending an electronic response to the data processing device with an identification key which is respectively unique for them.
4. The method as claimed in claim 3, characterized in that
- components of the specific automation system which can each be jointly assigned to a functional group in the model structure representation use identification keys of the same type when sending the electronic response.
5. The method as claimed in claim 3 or 4, characterized in that
- the respective components additionally send further data characterizing them with the electronic response.
6. The method as claimed in one of the preceding claims, characterized in that
- even a functional group which can be assigned a single component has this component ascertained and entered into the model structure representation to complete the structure representation which describes the specific automation system.
7. The method as claimed in one of the preceding claims, characterized in that
- the respective components of the specific automation system are addressed by the data processing

device using a component path which contains at least one identification for the respective component.

8. The method as claimed in claim 7, characterized in that
  - the data processing device ascertains information which is typical of a component of a functional group or which is common to a plurality of components of a functional group by generating a type path which indicates the relevant functional group from the relevant component path, and
  - the data processing device uses this type path to read the information for the relevant functional group from the text file.
9. The method as claimed in claim 8, characterized in that
  - the data processing device generates the type path from the component path by removing the at least one identification for the respective component from the component path to form the type path.
10. The method as claimed in one of claims 7 to 9, characterized in that
  - the component path and the type path are formulated using the language XPath.
11. The method as claimed in one of the preceding claims, characterized in that
  - the structure representation which describes the specific automation system is converted into a graphical representation by the data processing device.
12. The method as claimed in claim 11, characterized in that

- the graphical representation based on the structure representation is displayed using a user device which belongs to the data processing device.
13. The method as claimed in claim 11 or 12, characterized in that
- the structure representation is converted into the graphical representation, and displayed, using a browser device on the user device.
14. The method as claimed in one of the preceding claims, characterized in that
- XML is used for the text file reproducing the model structure representation.